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A Study of the Motivation of Leaders Followers and Isolates in a Group of Delinquent Boys

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A STUDY OF THE MOTIVATION OF LEADERS FOLLOWERS AND
ISOLATES IN A GROUP OF DELINQUENT BOYS

by

Robert G. Milligan

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Doctor of Philosophy

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VITA

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CHAPTER I

A. STATEMENT OF THE PROBLEM

The present research is directed at the study of the status of leaders, followers, and isolates in a group of delinquent boys. The aim is to determine how motivation might be related to the status that these persons have in the group. The goal is to develop further understanding of how the motivational tendencies of the individuals might account for their status in the group as leaders, followers, and isolates.

The study is concerned with the investigation of certain aspects of motivation. Of greater interest, is the striving that individuals have to socialize. The emphasis is upon the desire for people to participate in social activity. The concept of motivation is somewhat narrowed to a consideration of the tendency that individuals have to enter into social situations. The problem involves study of the inclination that people have to seek contact with others, react to other persons, and to participate in social interaction with other individuals.

A concentration upon this facet of motivation includes a more specific consideration of a related concept. Particular attention is directed to the study of projection. Projection is taken to mean a tendency that individuals have to interact with others on a more nearly inter-personal level. It

indicates a desire for self-involvement with others.¹ More specifically, the term is used to denote the tendency for the individual to interact with other persons in terms of himself as a personality. It signifies a desire on the part of the individual to interact with other individuals in terms of his own experiences, ideas, motives, attitudes, feelings, and emotions. Finally, it indicates that the individual interacts, and compares and interprets his interaction with others, on the basis of his own personality qualities.²

The ability to be out-going, to contact other individuals, and interact with others on an inter-personal plane, has important implication from the standpoint of individual and social development. These relationships are seen as an aid in the development of a concept of Self. They help the individual more clearly distinguish himself from others as a person. According to Murphy, Murphy, and Newcomb, this leads to greater self-evaluation in terms of others, and increased sensitivity to status goals such as the desire for "recognition, status, approval, or security."³ On the other hand, the person who is unable to project himself into situations involving other persons is likely to be less discriminating of himself in relation to others. He is likely to be less aware of social status. At the same time, he might even

¹Helen Hall Jennings, Leadership and Isolation, 2nd Ed., New York, 1950, 7.

²Ernest G. Schachtel, "Projection and its Relation to Character, Attitudes, and Creativity in the Kinesthetic Responses," Psychiatry, XIII, 1950, 69-100.

³Gardner Murphy, Lois Barclay Murphy, and Theodore Newcomb, Experimental Social Psychology, 2nd Ed., New York, 1937, 334.

become more egocentric. In this respect, Symonds points out that "without a process of socialization, an individual remains narrow, provincial, and limited."⁴

The above insights form the bases for the formulation of certain hypothetical constructs to be tested in this research. It is thought that some individuals in the group will probably be more interested in the achievement of status than others, because they more consistently project themselves, and take a more active part in developing relationships with others. Projection serves to make them more conscious of their status needs, and also becomes a means of attaining status in the group. By directing themselves outward into interaction with others, they can more actively manipulate social situations, and satisfy their needs for rank or position in the group. At the same time, other persons possibly place less emphasis upon the acquisition of position in the group, show less of a tendency to assert themselves, and take a more passive interest in inter-personal relationships. In fact, the latter members of the group may become quite egocentric, peculiar, and even pathological in their reactions to others.

On this basis, it is assumed that leader individuals will be more perceptive of social situations, and will show a greater tendency to project themselves outward, and to interact more fully in such situations. However, followers and isolates might be expected to show a lesser tendency than leaders

⁴Percival M. Symonds, The Ego and the Self, New York, 1951, 48.

to be perceptive of social situations, and that they will demonstrate less of a tendency to project themselves into such situations.

It is further suggested that isolates will manifest greater egocentricity, apprehension, tension, and confusion when required to project themselves into new social situations. On the other hand, it is assumed that leader individuals and followers will demonstrate less apprehension, egocentricity, peculiarity, or other unusual behavior, that might serve as obstacles to projection as they respond to various situations.

These assumptions are formulated with more specificity in hypothetical form, and presented for testing as follows:

1. Leaders indicate a greater tendency to project themselves into situations than followers.
2. Leaders reflect a greater tendency to project themselves into situations than do isolates.
3. Isolates manifest a greater tendency to react with apprehension and anxiety when required to project themselves into situations than do followers.
4. Isolates reflect a greater tendency to react with behavior indicative of apprehension and anxiety when required to project themselves into situations than do leaders.
5. Isolates indicate a greater tendency to react with unusual and incongruous behavior when required to project themselves into new situations than leaders.
6. Isolates reflect a greater tendency to react to new situations with unusual and incongruous behavior than do followers.

CHAPTER II

REVIEW OF THE LITERATURE

There have been efforts made by various investigators to evaluate the literature dealing with leadership. These reviews have served to consolidate information stemming from numerous investigations, and provide an overall view of some of the characteristics that appear to be emerging from research to distinguish leaders from other group members.

Stogdill¹ reviewed numerous studies in this respect, and among other things, noted that leaders tend to exceed others in such things as activity, social participation, and the characteristic of sociability.

A number of studies have produced results which indicate the leader as a more nearly out-going person who manifests more of an inclination to interact with other persons and situations.

Caldwell and Wellman² investigated leadership in school children. The leaders were persons who were elected to such positions by classmates. The leaders were compared with other children in terms of seven characteristics. Included in this evaluation, was a rating for extroversion and introversion.

¹Ralph M. Stogdill, "Personal Factors Associated with Leadership: A Survey of the Literature," Journal of Psychology, XXV, 1948, 35-71.

²W. Caldwell and B. Wellman, "Characteristics of School Leaders," Journal Educ. Res., XIV, 1926, 1-13.

The leader individuals were found to be more extrovertive than introvertive.

Merei³ studied leadership ability among nursery school children. The leaders were those designated as such by nursery school teachers, and other trained observers. The problem was to determine to what extent leaders could adapt themselves, adjust, and maintain their position of leadership when placed in a new and different group situation. It was learned that leaders were adaptable, and that these individuals adjusted to the extent of maintaining their leader status from one group to another.

Polansky, Lippitt, and Redl⁴ made a field study of children in a Summer Camp. They investigated the degree with which persons in various positions in the group manifest interaction with others. Status was determined with the use of the Sociometric Test. It was observed that leaders showed a greater tendency to influence the behavior of others, and they reacted more spontaneously to the behavior of other persons in the group.

Goodenough⁵ studied the social behavior of young children. The study was particularly directed at the investigation of leadership qualities in nursery school children. Among other factors, an attempt was made to relate leadership

³F. Merei, "Group Leadership and Institutionalization," Human Relations, II, 1949, 23-39.

⁴W. Polansky, R. Lippitt, and F. Redl, "An Investigation of Behavioral Contagion in Groups," Human Relations, III, 1950, 319-348.

⁵Florence L. Goodenough, "Interrelationships in the Behavior of Young Children," Child Development, I, 1930, 29-48.

and the tendency for social participation. Leadership was found to relate highly with the ability for social participation.

Gibb⁶ was interested in leadership in military situations. An effort was made to select officers with the aid of psychometric tests, the clinical interview, and the observation of behavior in quasi-life situations in which the essentials of various officer roles were imitated. A follow-up of leader success was utilized to determine the validity of the process. Leaders were selected mainly for their ability to project their personalities, and interact in various social situations on an inter-personal level. Officers who were selected on this basis were later found to be more successful than officers chosen by other means.

Bell and Hall⁷ investigated leadership among college students. The subjects were required to join discussion groups. The members of these groups were asked to evaluate and rate one another on a scale measuring leadership qualities. The group members were also administered a test designed to measure empathy. Both of the instruments were developed by the experimenters. Highly significant results were obtained to provide the conclusion that leaders were more socially perceptive, that they had more empathic ability, and were better able to understand others.

⁶C. Gibb, "The Principles and Traits of Leadership," J. Abn. Soc. Psychol., XXXII, 1947, 267-284.

⁷Graham B. Bell and Harry E. Hall, "The Relationship Between Leadership and Empathy," J. Abn. Soc. Psychol., XXXIX, 1954, 156-157.

Roff⁸ investigated combat leadership in the Air Force. A rating scale of traits relating to leadership was constructed by the investigator from many observations of leader behavior under combat conditions. The leader individuals and subordinates were asked to rate one another with the use of this scale. The combat leaders were found to be more flexible and sincere in developing relationships with others than were subordinates.

Several other investigations are considered especially important to the development of the present problem, because they present findings that tend to support the idea that leaders are less egocentric, and better integrated than others in the group.

Hunt and Soloman⁹ studied leadership among young boys in Summer Camp. The status of group members was determined with the use of a sociometric technique. The personal characteristics of the individuals were noted and judged by camp counsellors. Leader individuals were found to be more considerate, better organized in their approach, and less egocentric.

Hilkevitch studied the social relationships among grammar school children. Among other things, Rorschach Test material was evaluated in relation to the social acceptability level of a number of children. The results provided the

⁸M. A. Roff, "A Study of Combat Leadership in the Air Force by Means of a Rating Scale: Group Differences," J. Psychol., XXX, 1950, 229-239.

⁹J. Mc V. Hunt and S. L. Soloman, "The Stability and Some Correlates of Group Status in a Summer Camp of Young Boys," Amer. J. Psychol., LV, 1942, 33-45.

conclusion that highly accepted boys are "affect-controlled and stabilized by inner living."¹⁰

Hemphill¹¹ investigated leadership in groups of college students. A questionnaire was prepared which contained descriptions of numerous characteristics relating to leader behavior. Students who belonged to various college groups were asked to observe the activities of the leader in the various groups, and to evaluate the leader persons in terms of the items in the questionnaire. The results indicated that, regardless of the type of group situation, leaders reflected a number of characteristics. The leader was found to be one who was very active in group activity, and he was also more consistently seen as a person who avoided activities serving self-interest.

An important related study of leadership phenomena has been conducted with delinquent girls as subjects. The personalities of both leaders and followers were examined for characteristics which might account for their positions in the group.

Jennings¹² studied 400 girls at the New York State Training School for Girls. The sociometric Test was employed to indicate the leader individuals and the isolates. The cottage parents and the psychologist observed the

¹⁰Rhea R. Hilkevitch, Peer-Status and Personality: A Study of Eighth-Grade Children, Unpublished Ph.D. Dissertation, University of Chicago, Chicago, Illinois, 1951, 115.

¹¹John Hemphill, "Situational Factors in Leadership," Bur. Educ. Res. Monog., II, 1949, 1-136.

¹²Helen Hall Jennings, Leadership and Isolation, New York, 1950, 26.

behavior of these persons, and recorded various characteristics as they were manifested by these persons over a period of time. From this material, personality summaries were prepared for each individual studied. The evaluation of the data produced some important observations.

It was found that leaders were more likely to respond to others with empathy. They tended to be more sympathetic and understanding of other persons in the group. They were also more likely to become more self-involved with others.

Isolates were observed to be persons who were less able to extend themselves. They tended to be more typically involved with themselves, and they were more egocentric.

It was noted further that isolates appeared more immature, more dependent, and that they seemed more in need of help than were leader individuals.¹³

As a whole, the literature reflects certain trends which are of importance to the present research. There is much to indicate that leaders tend to be persons who more readily involve themselves in inter-personal relationships, and who more readily project their own personalities into situation requiring social participation. However, other group members, and particularly isolates, lack this tendency. In addition, the latter persons appear more nearly self-bound and egocentric. They are observed to be less mature in their social development. The present research is designed to further explore the meaning and consistency of these trends.

¹³ Ibid., e.g., 204.

CHAPTER III

METHODS AND PROCEDURE AND THE GENERAL DESIGN OF THE RESEARCH

A. DESCRIPTION OF THE SAMPLE

The sample was taken from the population at the Illinois State Training School for Boys. The boys included in the sample were those living in eight of the more nearly typical cottages at the institution. They ranged in age from fourteen to seventeen years. They were boys who were thought most likely to benefit from experiences derived from living together in a simulated family situation.

Since the institutional program required boys to be assigned housing in certain cottages for various highly specific reasons, some process of selectivity was needed to choose the sample from a number of cottages that would best fit the requirements of this research.

Boys who were placed in cottages for very young children were not included in the sample. Individuals who were assigned housing on the basis of disciplinary reasons were also omitted from the study. Persons who were housed in cottages principally on the basis of some work, trade or skill that they were commonly involved in at the institution, were also excluded from the experimental sample.

According to the program at the institution, demented boys, aments, and very serious behavior problem cases were regularly screened from the population.

and assigned to other institutions more nearly suited to their needs. This provided control over the inclusion in the sample of extremely disturbed boys, or mentally deficient individuals who might otherwise bear some spurious influence upon the results.

B. DESCRIPTION OF THE SOCIOMETRIC TECHNIQUE AND
JUSTIFICATION FOR ITS PRESENT USE

The Sociometric Test was utilized to indicate the social status of the subjects. Moreno¹ devised this test to study social activities among individuals in groups. One of its most important uses is to indicate the pattern of inter-personal choice or rejection among members of a group. The social status or rank of various group members can be determined by an evaluation of the degree to which different subjects are chosen or rejected by the other persons in the group.

The Sociometric Test can be employed in a wide variety of group situations. It can be used to study interaction among individuals in work situations. It can be used to indicate the social structure in groups formed for purposes of play or recreation. It has application in situations where the in-group atmosphere is particularly intimate, and where people gather to live together in a unit resembling a home-like situation.

Once a decision has been reached by the investigator as to whether he is to study one or more types of relationships, the test is fairly simple to administer. For example, the nature of the work, play, or living relationships among individuals may be objects of study. These are then oriented on a personal level, and proposed to the respondents in the form of questions. For

¹J. L. Moreno, Who Shall Survive,? New York, 1953, 92.

example, they might be asked the question: "Who from the group would you most like to work with?" The members of the group are then asked to write down in the order of preference their choices or rejections of other group members as potential associates in the suggested social situation.

The number of choices or rejections attributed to each person in the group by the others is then recorded. This information affords a basis for the determination of the social status of every individual in the group in terms of the number of choices or rejections he receives from the other group members.

The use of the Sociometric Test has several advantages for the present research. It lends precision to the evaluation of status as the term is used here. The study is directed at the investigation of status as a function of the ability for individuals to relate inter-personally. In order to investigate status as a function of interaction among personalities, a first step might be to define status as it results from such interaction. The Sociometric Test is especially suited to the task of affording this type of information.

A further advantage which is closely related to the first one refers to the realistic manner in which this approach furnishes such information. Use of the test, results in an indication of status by individuals who are actually involved in dealing socially with one another. The status levels of leaders, followers, or isolates are not indicated by impartial observers, or other more nearly out-group members. Status is designated by the voting of persons who are better acquainted with the different members of the group, i.e., the group members themselves.

This also suggests a third advantage. An evaluation of status is provided as it is indicated in an immediate realistic social situation. The respondents

are not forced into a rigid or unnatural situation in which they are asked to respond. They are required to indicate their response while they are actually adjusting to one another in a real situation.

A further advantage in the use of the test, is the simplicity with which it is administered, and responded to. No complicated interpretations of personality is needed. No involved scoring system is imposed upon the subjects. The directions are fairly simple, and easily imparted to the respondents. This has real advantage in an attempt to obtain this type of information from younger persons such as those composing the present sample.

C. VALIDITY AND RELIABILITY OF THE
SOCIOMETRIC TEST

Moreno² describes several attempts to validate sociometric data. These were conducted at the New York State Training School for Girls. These efforts are mostly directed at the study of falsification of response.

In one of these, the respondents were carefully instructed that there was no reason to feel threatened or fearful in the giving of their choices or rejections. The superintendent of the institution gave a talk, and reassured the subjects in this respect. They were also told that they were voting for a real purpose, and that the choices and rejections would be given meaning in reality in terms of the criterion for choice. It was reported that, following an inspection of the pattern of response, it was observed that the subjects responded sincerely, and that the results reflected more nearly the real attitudes of the individuals in the group. The conclusion was that the subjects would respond honestly if they were assured that they would not be punished by indicating their attitudes frankly. It was also concluded that the responses were more genuine when the subjects were informed that their

²Ibid., i.e., 242.

responses might very well lead to the desired results as indicated in the criterion for choice.

In a further attempt to validate the basis for choice among the same group, the remarks that the subjects made in relation to their responses were carefully noted. The various statements made about an individual were found to check closely against "other statements, and hence appeared well supported."³

Richmond⁴ attempted a more systematic study of the basis for choice on a personality level. The study was conducted in a school for nurses. Thirty-two candidates were given an intensive psychological examination. They were also administered the Sociometric Test. The choice-status of the individuals was found to be supported by the psychological evaluations of these persons. The author accepted these findings as an indication of the validity of the test.

Although there is need for further research in this area, there is some information available which tends to suggest that sociometric choice is valid when certain conditions are met. There is also information to indicate that choice-status is a function of the personalities involved.

There have been studies made of the reliability of the Sociometric Test. Many of these deal with the consistency with which the number of choices or responses remain stable for individuals in a group between two separate testings, or with the stability of the ranks that individuals have in the group from one testing to another.

³Ibid.

⁴Winifred Richmond, "Sociometric Tests in a Training School for Nurses," Sociometry, XIII, 1950, 29-38.

Moreno⁵ administered the test to a group of adolescent girls. After a period of ninety days, the test was again administered to the same group. An evaluation and comparison of the choices made in the two sessions, revealed that the original choices and responses were maintained to the extent of ninety-five per cent. The conclusion was that the pattern of response is consistent from one testing to another.

Zeleny⁶ examined the reliability of the test when used with college students. The Sociometric Test was administered to members of a discussion group on successive days over a period of time. The consistency with which the individuals maintained their choice-positions in the group from one day to the next was compared. Positive reliability coefficients ranging from .93 to .95 were obtained, and tended to indicate the consistency of the positions of individuals in the group from one test situation to another.

Jennings⁷ investigated the consistency with which adolescent girls indicate choice of others. A second test was administered to the same group four days after the first one. The positive and negative choices produced by each subject in the two sessions were compared. A reliability coefficient of .96 was obtained to indicate the consistency of positive choice. A reliability coefficient of .93 reflected the stability of the rejections.

⁵Moreno, Who Shall Survive,? 242.

⁶Leslie Day Zeleny, "Sociometry of Morale," Amer. Sociol. Review, IV, 1939, 799-808.

⁷Helen Hall Jennings, Leadership and Isolation, New York, 2nd Ed., 1950, 31.

According to the above information, the Sociometric Test is capable of producing consistent results when various performances are compared on successive testings. The reliability of the test seems high when the test is used in different social situations, and when different subjects are employed in the studies.

D. DESCRIPTION OF THE THEMATIC APPERCEPTION TEST AND
JUSTIFICATION FOR ITS PRESENT USE

Morgan and Murray⁸ first published the Thematic Apperception Test in 1935. In its present form, the test consists of a set of thirty somewhat ambiguous pictures which are printed achromatically on pasteboard cards. An additional blank card is included in the test.

The pictures are designed so as to have special applicability in the testing of males or females, or when testing persons of various ages. On these bases, four sets of twenty cards can be arranged for use with different subjects. Each set of twenty can be subdivided into two series of ten pictures. The test is administered in two sessions. Ten pictures are usually administered during the course of a session.

In the test situation, the subject is asked to make up a story about the pictures. The subject is encouraged to relate the scene in the picture to the past, present, and future. The subject is asked further to describe the activities of the figures in the pictures, and to indicate the thoughts, feelings, and emotions of the figures.⁹ This material is recorded by the examiner,

⁸C. Morgan and H. Murray, "A Method for Investigating Fantasies: The Thematic Apperception Test," Arch. Neurol. and Psychiat., XXXIV, 1935, 289-306.

⁹Henry Murray, Thematic Apperception Test Manual, Cambridge, 1943, 3.

and is generally written as it is related.

The fact that the pictures are relatively ambiguous provides a situation which is more nearly free from inhibition. The subject is encouraged to enter freely into the situation, interact, and interpret the pictures in terms of his past experiences, needs, motives, ideas, attitudes, intuitions, feelings, and emotions. He is given free reign in this, and is encouraged to go beyond the limits of objective reality, and to reflect the use of imagination and fantasy.¹⁰

The TAT is a projective test of personality. Frank¹¹ indicates the importance of such a test when he points out that a projective technique is designed:

to induce the individual to reveal his way of organizing experience by giving him a field (objects, materials, experiences) with relatively little structure and cultural patterning so that the personality can project upon the plastic field his way of seeing life, his meaning, significances, patterns and especially his feelings. Thus we elicit a projection of the individual's private world because he has to organize the field, interpret the material and react affectively to it.

Most of the TAT pictures represent various situations in which human figures are portrayed. Henry¹² points out the value of the test as a device for appraising perceptual response.

¹⁰Ibid., e.g., 5.

¹¹L. K. Frank, "Projective Methods for the Study of Personality," J. Psychol., VIII, 1939, 389-413.

¹²William E. Henry, The Analysis of Fantasy, New York, 1956, 8.

The TAT has several advantages in relation to the present research. It is especially adaptable to an evaluation of the extent and nature of the interactions which an individual attempts to enter into while seeking to adjust socially.

It is a personality test designed to stimulate the individual to reflect his inner tendencies, feelings, attitudes, and other qualities. It provides the opportunity to evaluate the extent to which the individual is capable of projecting himself into a situation. Since the present problem involves an evaluation of the ability of individuals to involve themselves in situations, the test is especially suitable to the task of stimulating response on such a level.

A further related advantage in the use of the test is indicated in its value as a stimulus in eliciting response to social situations. The pictures portray situations much like those the subject might be confronted with in everyday living. The subject can be expected to react to these in much the same way as he would in an actual situation. Most pictures contain human figures. When confronted with such stimuli situations, the subject can be expected to reflect his ability to become involved with others in social situations. The behavior of the subject should present a sample of his ability to establish contact with, react to, and interact in various situations which demand some level of social adjustment.

E. THE VALIDITY AND RELIABILITY OF THE
THEMATIC APPERCEPTION TEST

The problem of the validity of the TAT has been approached in a number of ways. One of these involves an evaluation of a certain group of subjects with both the TAT and some other test or technique. The data from the two sources is then evaluated and compared to indicate the validity of the TAT data. In other cases, the TAT might be administered to subjects having known characteristics. The TAT results are then evaluated in terms of the known characteristics of the persons tested.

Combs¹³ collected autobiographical material on a number of subjects. He administered the TAT to the same subjects. The aim was to determine to what extent the TAT material was related to the autobiographical data produced by the subjects. It was found that about thirty per cent of the TAT stories contained important material taken from the life experiences of the subjects.

Henry¹⁴ employed Navaho and Hopi Indian children as subjects. A wide range of individual and social characteristics were evaluated with the TAT.

¹³A. W. Combs, "The Validity and Reliability of Interpretation from Autobiography and Thematic Apperception Test," J. Clin. Psychol., II, 1946, 240-247.

¹⁴William E. Henry, "The Thematic Apperception Technique in the Study of Culture-Personality Relations," Genetic Psychol. Monog., XXIV, 1947, 3-139.

The TAT material was compared with information provided by expert anthropologists who specialized in the study of Indian affairs. It was learned that the analysis based on information taken from the TAT stories was in essential agreement with the information produced by the experts.

Harrison¹⁵ administered both the TAT and the Rorschach Test to the same group of subjects. The responses on the two tests were evaluated in terms of certain personality variables. A comparison of the data produced by the two tests resulted in the conclusion that the results on both tests were found to be highly significant in terms of validity, since the results were greatly similar as produced by the two tests.

Murray and Stein¹⁶ studied the performance of individuals on the TAT who were known to manifest certain traits and characteristics. The TAT was administered to members of the ROTC. These individuals were then rated for leadership ability on the basis of TAT performance. These ratings were then compared with the ratings of these individuals which were provided by their supervising officers. A correlation Coefficient of .65 was indicated between the judgments by officers and the TAT ratings.

Studies that have dealt with the validity of the TAT tend to support the validity of the test. There is information to indicate it as a test having much utility in the evaluation of personality. It has also been found valid in

¹⁵R. Harrison, "The Thematic Apperception and Rorschach Methods of Personality Investigation in Clinical Practice," J. Psychol., XV, 1943, 49-74.

¹⁶H. Murray and M. Stein, "Note on the Selection of Combat Officers," Psychosom. Med., V., V., 1943, 386-391.

the evaluation of persons on a social and cultural level. It is adaptable to a wide variety of situations in which individuals might be evaluated.

There is also information to indicate the reliability of the TAT. Two approaches to the study of the reliability are especially evident in the literature. One seeks to determine the extent to which different independent analysts agree in their interpretation of the same TAT protocols. A second approach attempts to determine the extent of similarity in performance of subjects on successive administrations of the test.

Clark¹⁷ administered one TAT card to fifty subjects. The stories were rated by two analysts. Correlations were computed to indicate agreement between the two sets of ratings. Correlations of .90 resulted on some categories. The correlations dropped to .30 on other categories. However, it was also found that misunderstanding as to the definition of some of the items was responsible for the lack of agreement on some of the ratings.

Tomkins¹⁸ administered the TAT to a group of forty-five young women who ranged in age from eighteen to twenty years. The individuals were then randomly assembled into three groups having fifteen persons in each group. The first group was administered the TAT again three months later. The second group was given the test six months later. The third group took the test a second time ten months later. The ratings between the first and second

¹⁷R. Clark, "A Method for Administering and Evaluating the Thematic Apperception Test in Group Situations," Genetic Psychol. Monog., XXX, 1944, 1-55.

¹⁸Silvan S. Tomkins, The Thematic Apperception Test, New York, 1947, 6.

administrations of the test were correlated. The reliability coefficient for ratings of the group given the test two months later was .80. Reliability coefficients for successive ratings for the second and third groups were .60 and .50 respectively.

The results of these reliability studies tend to support the consistency with which the TAT is capable of producing information. This appears to be especially the case when the variables to be analyzed are carefully defined. The test results appear not to be stable over a long period of time. However, this might reflect personality change, and seems not necessarily indicative of a lessening of reliability with the passage of time.

F. FORM AND PROCEDURE FOR ADMINISTERING THE SOCIOMETRIC
TEST AND TAT TO THE SUBJECTS

Moreno¹⁹ also indicated that the validity of the Sociometric Test was dependent upon the clarity, conciseness, and meaningfulness, with which a criterion for choice was selected. Therefore, a single criterion was selected to reduce the possibility of confusion. The criterion "living in proximity" was chosen.²⁰ Most of all, this criterion was most proper and meaningful in terms of the situation in which the group members were actually interacting. It seemed one that would be most easily understood by the subjects.

It was decided that the type of information needed could be obtained on a positive choice basis. There seemed no immediate advantage in asking the subjects to indicate rejections in their sociometric responses. There was also a desire to avoid complexity or confusion among the respondents by making the task as simple and concrete as possible. A 5-choice sociometric question was prepared.

It was felt that this number would be adequate to the task of reflecting the degree and kind of projection of the individuals if the cards were otherwise selected carefully. The seven cards suitable for boys and men were examined.

¹⁹Moreno, Who Shall Survive,? 99.

²⁰Ibid., e.g., 98.

Four of these cards were dropped from the test. They seemed to offer less in the way of a stimulus situation into which the subject might project his ability to interact to social situations. The rejected cards either contained a single figure, or a situation depicting inactivity. The following cards were retained: 6BM, 7BM, and 8BM. Card 12M, a card suitable for use with all males, was added, because it also met the above requirements. Cards 2, 4, and 10, which are suitable for use with both sexes, and with individuals of all ages, were included. They also depicted several individuals in a social situation. Card 1 was included in the set, because it seemed one which should be easy for the present subjects to identify with, and also appeared to have advantage in being a satisfactory starting card. Card 5 was included, because it seemed to have great stimulus value in terms of mother-child relations. Finally, cards 14 and 16 were included in the set, because they were designed for use with all subjects, and they were the least structured. It was thought they would tend to be really discriminating, and that these cards presented a real challenge to the ability of the individual to project himself into situations.

The eleven TAT cards that were selected for the set are described by Murray as follows:

1. A young boy is contemplating a violin which rests on a table in front of him.
2. Country scene: in the foreground is a young woman with books in her hand; in the background a man is working in the fields and an older woman is looking on.
4. A woman is clutching the shoulders of a man whose face and body are averted as if he were trying to pull away from her.
5. A middle-aged woman is standing on the threshold of a half-opened door looking into a room.
- 6BM. A short elderly woman stands with her back turned to a tall young man. The latter is looking downward with a perplexed expression.

- 7BM. A gray-haired man is looking at a younger man who is sullenly staring into space.
- 8BM. An adolescent boy looks straight out of the picture. The barrel of a rifle is visible at one side, and in the background is the dim scene of a surgical operation, like a reverie-image.
- 10. A young woman's head against a man's shoulder.
- 12M. A young man is lying on a couch with his eyes closed. Leaning over him is the gaunt form of an elderly man, his hand stretched out above the face of the reclining figure.
- 14. The silhouette of a man (or woman) against a bright window. The rest of the picture is totally black.
- 16. Blank card.²¹

The TAT materials were introduced with the instructions, Form B, which Murray prescribes for use with children, as follows:

This is a story telling test. I have some pictures here that I am going to show you, and for each picture I want you to make up a story. Tell me what has happened before, and what is happening now. Say what the people are feeling and thinking and how it will come out. You can make up any kind of story you please. Do you understand? Well, then, here is the first picture. You have five minutes to make up a story. See how well you can do.²²

The usual instructions offered by Murray²³ for use with the blank card were given:

See what you can see on this blank card. Imagine some picture there and describe it to me in detail. Now tell me a story about it.

The pilot study answered a number of questions. The overall procedure fitted in well with the schedule of events at the institution. No major difficulty was encountered in scheduling either the Sociometric Test, or the

²¹Murray, Thematic Apperception Test Manual, Cambridge, 1943, 18.

²²Ibid., i.e., 3.

²³Ibid., i.e., 5.

TAT testing.

A total of forty-two boys made up the membership of the cottage. Thirty-nine boys were present for the Sociometric Test. For various administrative reasons at the institution, three of the group members were not available.

When the forms with which the Sociometric Test and the TAT would be used had been decided, the individuals in the eight cottage groups were administered the tests. The two tests were administered to one cottage group at a time. The procedure followed in administering the tests to each group was essentially the same.

The Sociometric Test was administered in the cottage setting in the evening when the members were regularly assembled in the usual manner. The group was gathered in the dining room of the cottage. Each subject was given a pencil and a sheet of paper. They were instructed to write or print their name at the top of the paper. The usual efforts at rapport were made, and then the subjects were given the instructions.

Following testing, the answer sheets were collected. Some of the individuals wanted to ask questions, and these were answered. The boys were told that they would be called upon to take part in the study again. The test session was then concluded.

On the following day, testing was started with the TAT. The same subjects were called individually, and in no particular order of preference. The availability of the subjects was probably the only criterion. Testing had to be coordinated with institution procedure. Since some of the individuals were occasionally scheduled to leave the institution, they were given preference. Testing then continued until all subjects had been administered the TAT.

CHAPTER IV

SPECIAL PROBLEMS IN THE DESIGN AND ANALYSIS OF THE THEMATIC APPERCEPTION TEST DATA

A. THE USE OF THE TAT IN RESEARCH

The TAT has a wide range of application and utility. The test has been used in many forms. This has resulted in the further development of various methods for the use of the TAT, and has also produced systems for the analysis of the results. However, most methods are not suited to wide-scale application in all situations. Therefore, the manner in which the TAT is to be utilized is generally modified to fit the needs of the specific situation. This is especially the case in research where the concentration of effort is upon the study of some fairly specific qualities of the subjects. The present practice is for research workers to develop some methodological approach that will best suit the particular research project. Some method, or variation of some method, is usually selected, manipulated, and employed to provide what appears as the most efficient technique for the evaluation and measurement of the variables studied.

B. PRESENT APPLICATION OF THE THEMATIC APPERCEPTION TEST

In the present research, the TAT is employed to provide experimental situations into which the subject is encouraged to project his personality. The test is employed to provide simulated social situations which require the individual to perceive, react to, and interact with other objects and persons. The assumption is that the subject will reveal his real ability to project himself into such situations. The expectation is that he will reflect the extent to which he manifests this tendency, and that he will at the same time reveal something of the nature of his projections.

In selecting the TAT variables to be used in getting this information, first consideration was given to the evaluation of the extent to which persons perceive, react to, and interact with the stimulus materials. Any number of methods were reviewed. It was decided that some concepts from several sources would be of value in providing a technique adequate to an evaluation of this tendency.

Henry¹ provides a list of what he considers to be some of the most outstanding and common features of the various TAT pictures. These are elements thought to be readily perceived by most people. It is suggested that the perception or omission of these has interpretative value in the use of the TAT. The list was employed in the present use of the TAT to provide some estimate

¹William E. Henry, The Analysis of Fantasy, New York, 1956, 239.

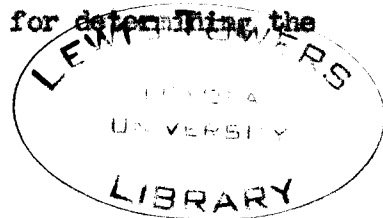
of the ability of the subject to perceive the more outstanding and more easily identified features of the situation to which he was reacting.

Henry² also describes a format that has use in the evaluation of the extent to which a subject actually projects his personality into the pictures. In response to a picture, a subject might possibly function at three levels of projection. The individual might simply describe items in the pictures. The respondent might only provide a description of some simple interaction that is taking place. Thirdly, the subject might become ego-involved with the stimulus material, more readily identify with the figures, and enliven the response with a greater use of imagination, and indicate actions, feelings, emotions, and thoughts. This form of evaluation was employed as a part of the present technique to provide some estimate of the depth to which a subject might respond to the stimuli.

Henry³ also refers to a technique for evaluating the ability of the subject to integrate some of the essential features and develop a story about the picture. The response is checked to determine whether the subject provided a description of some of the characteristics of the environment of the characters referred to in the story. The theme is also examined to determine whether there is also reference to the feelings, motives, and other experiences of the figures in the stories. The stimulus which the environment imposes upon the character is also noted. The reactions of the characters to these are also checked. Finally, the outcome is studied. This method for determining the

²Ibid., i.e., 62.

³Ibid., i.e., 3.



extent to which an individual is capable of producing a story was also utilized in the present adaptation of the TAT.

Since the present study is also directed at an examination of the nature of the subjects and the inclination for individuals to actually manifest inhibition, anxiety, eccentric, and peculiar or unusual behavior when called upon to project themselves into situations, there was also an effort to derive some techniques for evaluating these actions.

First, an effort was made to acquire some technique that is considered of use in indicating tension, inhibition, apprehension, and anxiety. The side remarks made by a subject during testing are usually considered to have interpretative value in this respect. Henry refers to the significance of such remarks, and mentions that they are indicative of "inconsistency, self-consciousness, and censorship on the part of the subject."⁴ Following a review of some of the studies of persons with known personality difficulties, Bell noted that individuals with anxiety states often respond to the TAT pictures with "anxiety-cathexed questions" of the examiner.⁵ It was also found that neurotic children frequently respond to the TAT pictures with the "interjection of questions and comments about the examiner, the child himself, the psychiatrist, siblings, or parents."⁶ The value of side remarks as indications

⁴John Elderkin Bell, Projective Techniques, New York, 1949, 60.

⁵Ibid., i.e., 232.

⁶Ibid., i.e., 241.

of threat, conflict, tension, or anxiety appear to have utility in terms of the present problem, and this was also adopted as an additional variable to be employed in the present use of the TAT.

A further effort was made to develop some technique for the evaluation of incongruous and unusual response to the TAT materials. It was also noted by Bell that persons who are mentally ill, and very withdrawn and egocentric persons, more readily produce responses of this nature. For example, it was noted that schizophrenic persons quite frequently respond to the TAT with neologisms, strange modes of expression, irrelevant material, and other "absurdities and bizarre elements."⁷ Therefore, the investigation of queer and incongruous response was also included as a part of the present technique.

This resulted in the selection of five TAT variables which have been found useful in the evaluation of TAT data. The first three that were mentioned were intended for present use to indicate the extent that the subjects in this study might perceive outstanding features in the stimulus materials, project their inner-most personality qualities into the various stimulus situations, and, thirdly, organize their approach to the situation to the extent of actually producing a story. The last two variables were selected for use in demonstrating inadequacy and unusualness of response to the TAT situations. One was chosen to reflect inhibition, tension, conflict, and anxiety as obstacles to projection. The other was selected to give an estimation of incongruous, or actually bizarre characteristics in the response of individuals to the TAT.

⁷Ibid., i.e., 229.

These variables were then incorporated into a method for analyzing the TAT data in terms of the present problem. A format was prepared which included a set of directions for evaluating and scoring each of the five variables. The system was first tried with ten subjects from the present sample whose TAT records were not needed in the analysis of the results of this research. It was noted that the categories needed revision in some respects to fit the level of response received from this sample. It was also necessary to refine the meaning of the variables, and to define them in terms of some specific concepts for the sake of objectivity. These changes were made, and noted in the directions, as the analysis proceeded through the trial cases. When this was completed, the format was structured in its final form. The responses of the subjects in the experimental group were then evaluated and scored on the basis of this technique. A copy of the format is provided in Appendix I.

More generally, the variables are listed as follows:

1. The tendency for an individual to attend to and perceive aspects of the stimulus situation which might be fairly commonly perceived by others.
2. The ability for an individual to involve himself in the stimulus materials to the extent of manifesting enlivened imagination in relation to the use of action, thought, feeling, and emotion in making a response to the stimulus situation.
3. The tendency for the subject to contact the stimulus materials, interact with the stimulus situation, and organize his reactions to it, and construct a theme that incorporates four features that might be essential in indicating projection of self into a situation with some degree of order and consistency.
4. The tendency for the individual to interrupt interaction with a stimulus situation by frequent exclamations indicating blocking or conflict, and by the use of side-remarks out of context, indicating hesitancy, lack of assurance, insecurity, and anxiety.

5. The tendency for the individual to react to a stimulus situation with gross inconsistency, disorganization, and with illogical, and even pathological response.

CHAPTER V

ANALYSIS OF THE RESULTS

A. VALIDITY AND RELIABILITY OF THE SOCIOMETRIC RESULTS

Some indication of the validity of the sociometric data is demonstrated in Tables I and II, and in Appendix II. The distributions of choice in the eight groups that were tested tended to reflect characteristics that are expected with the use of the Sociometric Test. For the most part, they reflected a tendency to positive skewness, were platykurtic, and provided a range of choice that made it possible to differentiate clearly the most chosen, average-chosen, and under-chosen persons in each group.

It has been indicated that sociometric choice distributions have characteristics that are somewhat different from the normal curve. The distributions can be expected to be skewed. The results are based upon the fact that the respondents are carefully instructed to designate those who would rate higher as associates than others. The test is administered with the purpose of getting the subjects to be discriminating in deciding specifically who they would assign the highest choice-status in the group. They are not asked to indicate as precisely those persons who they would attribute middle position in the group, nor are they requested to indicate those who are given the lowest rank when positive choice is being studied among the individuals in a group. The middle and low ranks are assigned rather indirectly, because they are simply those

persons who more or less do not fit into the first group. Jennings¹ emphasizes this as a phenomenon to be expected in the treatment of sociometric data.

Inspection of the present distributions of choice indicated the tendency for them to be positively skewed. They were also noted to be rather flat or platykurtic in shape. These features were investigated statistically. Formulas for determining skewness and kurtosis were applied to each of the eight distributions.² The formulas for determining the standard errors of these measures were also used in an effort to evaluate the characteristics of these distributions.³ The limits of significance for these statistics were also noted.⁴ The results of this statistical treatment are provided in Table II.

Although in none of the distributions is skewness noted to be significant at the .05 or .01 levels, and, while some distributions reflect this characteristic more or less than others, all reflected some tendency in this direction. In addition, it was noted that all of the distributions, with the exception of one, were significantly platykurtic at the .01 level of confidence, and the one remaining distribution was found significantly flat in shape at the .05 level.

The reliability of the sociometric results was also examined in the last four cottages. This was done with the use of the test-re-test method for investigating the reliability of the Sociometric Test.

¹Helen Hall Jennings, "Quantitative Aspects of Tele Relationships in a Community," Sociometry, II, 1939, 93-100.

²Garrett, Statistics in Psychology and Education, 121.

³Ibid., i.e., 220.

⁴Ibid., i.e., 190.

TABLE I

THE NUMBER OF SUBJECTS, RANGE, MEAN, AND STANDARD DEVIATION
INDICATING THE DISTRIBUTION OF CHOICE IN EACH
OF THE GROUPS TESTED

Groups	N	Range	Mean	SD
I	39	0-23	4.87	4.41
II	51	0-21	4.65	4.37
III	46	0-13	3.54	3.24
IV	35	0-12	4.34	2.88
V	32	0-15	4.28	3.29
VI	34	0-12	4.71	3.78
VII	37	0-14	4.32	3.17
VIII	30	0-11	4.30	3.02

The test was re-administered approximately one week apart to the individuals in these cottages. The span of time between the first and second testing had to be limited to one week. Little control could be exercised over the fact that past that amount of time individuals tended to be shifted about, or even discharged from the institution. The test was administered to each of the groups under the same conditions. The physical surroundings were the same. The directions were the same. The same procedure was followed as in the original test situation. The fact that they should vote for absent members of

TABLE II
SKEWNESS AND KURTOSIS FIGURES FOUND TO CHARACTERIZE THE DISTRIBUTION
OF POSITIVE CHOICE IN THE EIGHT COTTAGES TESTED

Group	Sk	sk	t	Ku	ku	t	N	df	N-1	+ .01	- .05
I	1.00	0.66	1.51	0.31	0.04	7.10	39	1	38	2.71	2.02
II	1.00	.58	1.72	.25	.04	6.41	51	1	50	2.68	2.01
III	1.00	.61	1.64	.25	.04	6.10	46	1	45	2.69	2.02
IV	.25	.62	.40	.33	.05	7.10	35	1	34	2.72	2.03
V	1.00	0.73	1.37	.13	.05	2.55	32	1	31	2.75	2.04
VI	1.00	.89	1.12	.04	.05	7.00	34	1	33	2.72	2.03
VII	2.75	4.41	.62	.24	.05	5.11	37	1	36	2.72	2.03
VIII	.75	.81	.93	.21	0.05	4.05	30	1	29	2.76	2.04

the group was given particular emphasis in the second test situation.

The data was collected. The individuals in each group were ranked on the basis of the number of choices each received from others in his group. The ranks that the individuals had in a group in the two sessions were then correlated. The rank-difference formula was applied.⁵ The correlation coefficients and indications of significance are given in Table III.

TABLE III
TEST-RE-TEST CORRELATIONS INDICATING THE CONSISTENCY OF
THE CHOICE-STATUS OF INDIVIDUALS BETWEEN TESTS

Groups	Correlation Coefficients Obtained	Significance .05	Levels .01
V	0.70	.349	.449
VI	.71	.349	.449
VII	.82	.325	.418
VIII	0.82	.361	.463

The conclusion is that the ranks of the individuals in the group as provided by the sociometric procedure remain consistent from one administration of the test to the next over a one week period. This affords an indication of the reliability of the sociometric results employed in this study.

B. THE RELIABILITY OF THE TAT RESULTS

Two approaches were employed to provide an indication of the consistency of the TAT data. In one of these, a number of TAT records were analyzed a second time by the experimenter.

The seventy-five TAT protocols were shuffled, and stacked in no particular order. All the odd-numbered records were taken from this group. This provided thirty-eight TAT protocols for the second analysis of the material. This included the records of twelve leaders, fourteen followers, and twelve isolates. The same method was employed in both evaluations. A period of eight months separated the two attempts.

The results indicated for the subjects on each variable in the two evaluations were then compared with the use of a linear correlational technique designed for use with ungrouped data.⁶ This information is given in Table IV. The figures of significance are also provided.

The correlation coefficients were found to be positive and significant for each of the variables evaluated in the two sessions. This indicates the reliability of the results as determined by a second scoring by the same person.

A further attempt to demonstrate the reliability of the results were made, when a second psychologist was asked to evaluate a number of TAT records. Fifteen TAT protocols were randomly selected from the pile of seventy-five. The

⁶Ibid., i.e., 291.

TABLE IV
CORRELATION COEFFICIENTS INDICATING RELATIONSHIP BETWEEN A
FIRST AND SECOND SCORING OF FIVE VARIABLES ON
THIRTY-EIGHT TAT RECORDS

Variables	Correlation Coefficients Obtained	Levels of Significance	
		.05	.01
I	0.78	0.325	0.418
II	.91	"	"
III	.91	"	"
IV	.99	"	"
V	.84	"	"

same method for evaluating the responses was utilized.

It has been demonstrated that reliability is greater when the same person evaluates a set of TAT material twice, and that reliability becomes greater when others rate the same set of material when the other person understands the bases for the interpretations.⁷ On this basis, every effort was made to train the second analyst to make the type of interpretations involved in the use of this technique for the evaluation of the TAT data.

The second person was read the instructions. These were carefully explained. Examples of scorable responses as well as non-scorable responses

⁷A. W. Combs, "The Validity and Reliability of Interpretations from the TAT and Autobiography," Jr. Clin. Psychol., II, 1946, 240-247.

were given. The reasons for scoring were discussed. The second psychologist was encouraged to ask questions about the meaning of various items in the directions. Several TAT records, from the same sample, which were not employed in determining the experimental findings, were analyzed with the second person. During this practice analysis, evaluations and interpretations were discussed and clarified. Finally, the second analyst was informed that, during the analysis, interpretation and clarification of any aspect of the teaching would be available, and that it was of great importance that no scoring be done if there were any doubts about the evaluation of any response.

The second analyst proceeded with the fifteen records. The same statistical treatment was applied in comparing the results of this evaluation with the results obtained in the original analysis. The resulting reliability coefficients and figures of significance are provided in Table V.

All correlations were found to be positive and significant. Only the first, failed significance at the .01 level, and this became significant at the .05 level of confidence. The analysis of a second psychologist was found to be consistent with the results obtained from the original evaluation of the data.

TABLE V
CORRELATION COEFFICIENTS INDICATING AGREEMENT OF TWO ANALYSTS ON
FIVE VARIABLES EMPLOYED IN THE EVALUATION OF
FIFTEEN TAT PROTOCOLS

Variables	Correlation Coefficients Obtained	Significance Levels	
		.05	.01
I	0.63	0.514	0.641
II	.85	"	"
III	.99	"	"
IV	.94	"	"
V	.94	"	"

C. TREATMENT OF THE SOCIOMETRIC DATA

In this study, leaders, followers, and isolates were designated on the basis of sociometric choice-status. Leaders are considered those persons in the group who are the most highly-chosen. Followers are the average-chosen persons. Isolates are those persons who are least-chosen by their peers. In order to identify individuals having these levels of status in this sample, the sociometric data was carefully analyzed. This was done for each of the eight groups tested.

The number of choices that every individual received from the other members of the group was tabulated. On this basis, frequency distributions were prepared to indicate the pattern of choice in each group. This provided a description of the distribution of choice among the members of each cottage. It also presented evidence regarding the utility of the data in revealing the most-chosen, average-chosen, and least-chosen persons in the various groups. It provided a basis for the statistical analysis of the results that would lead to the actual selection of the leaders, followers, and isolates in each of the groups studied. This basic information is indicated in Appendix II.

The range of choice in each group was noted. The Mean number of choices in each group was also determined. The Standard Deviation was also computed to indicate the scatter of choice about the Means in these distributions. The latter two statistics were computed with the use of the Short Method referred to

by Garrett.⁸ This information is provided in Table I page 40.

The information in Table I indicates that the distribution of choice in each group ranged from a lower limit of zero. Most of the individuals tended to locate around an average for the group. Some tended to scatter about the mean number of choices for the group by three or four votes. Several individuals in each group always received a number of choices in excess of the average number for the group. This located these persons at a relatively high level at the top end of the distribution of choice. This pattern is consistent in the eight group studied.

This points to the value of the data in indicating the most-chosen, average-chosen, and least-chosen persons. It points to the utility of the sociometric results in each of the groups tested. In all groups, the distributions point to those persons having comparatively little choice-status, or none at all. Persons having a relatively high rank are also indicated. Individuals located somewhere between these extremes in each group are also indicated.

However, this only serves to point to the position of leaders, followers, and isolates on a relative basis. It is necessary to indicate more precisely the limits of the distribution of choice that will more definitely designate the leaders, followers, and isolates in each group. There is the need to develop statistical limits to more accurately define the leaders, followers, and isolates in each group. There is the need to develop statistical limits to more accurately define the leaders, followers, and isolates in each group.

⁸ Henry E. Garrett, Statistics in Psychology and Education, 3rd Ed., New York, 1947, 60.

Some statistical treatment is necessary that will be consistent in providing this information from group to group. A statistical technique is needed that has practical application in terms of the nature of the distributions of choice.

The distributions tended to be somewhat positively skewed. They were very significantly platykurtic in shape. They tended to take on a rectangular shape. On this basis, it seemed that further statistical treatment of the data would best be done with techniques more suitable to the nature of the data, and those not necessarily based upon assumptions relating to the normalcy of the distributions.

Since the sociometric results are also based upon a ranking procedure, and not upon precise units of measurement, this needed to be taken into account while selecting a statistical technique applicable to the accurate evaluation of this type of information. A technique was needed that would allow an accurate treatment of raw data resulting from the judgments of subjects, and the rankings of the persons studied. It was necessary to select a statistical technique that would, on this basis, also convert the sociometric raw data into scores that could be used to more precisely designate the high, middle, and low choice-status of individuals in the groups studied in this research.

The idea of Percentile Rank seemed more nearly adaptable to this situation.⁹ The use of Percentile Ranks demands no assumptions with respect to the normalcy of distribution of choice. The use of this statistic is adaptable to distributions which tend to be rectangular in form.¹⁰ The use of this

⁹Ibid., i.e., 80.

¹⁰Ibid., i.e., 159.

technique is particularly applicable to data produced as a result of some judging or ranking of individuals.¹¹ This technique also provides for the conversion of ranks into scores.

The raw scores of individuals in each group were then changed into scores with the use of the formula, provided by Garrett,¹² which converts orders of merit into equivalent Percentile Ranks.

It was decided that a Percentile Rank of 90 or above would be used to indicate the highly-chosen, or leader individuals in each group. A Percentile Rank of 10 or below was employed to indicate the least-chosen, or isolates. The followers were to be those persons having Percentile Ranks between 45 and 55 inclusive. However, it was also noted that in two groups, no scores fell in the middle range having the limits PR 45 and PR 55. In order to insure a middle group from each cottage, in the interest of good sampling, the PR range for selecting followers in these two groups had to be changed slightly. It was decided to select those subjects in the middle range in these two cottages whose PRs represented the next closest score to the midpoint of this range, or interval. When taken as an interval, the midpoint is represented by a PR of 50. In one of the cottages, the next closest PR to this was 42. All the individuals in this group having a PR of 42 were then selected to represent the middle group of subjects, or follower group. In the other cottage, a PR of 43 was found to be the next closest score to the midpoint of this interval. Those

¹¹Ibid., i.e., 81.

¹²Ibid., i.e., 82.

subjects having a PR of 43 were then indicated as representatives of the middle group in this cottage.

Other individuals in the eight groups studied, who had PRs other than within the ranges given, were omitted from further consideration in this research. This was done in order to define the status of leaders, followers, and isolates as precisely as possible. The importance of accurate definition of classes or categories is emphasized by Guilford. He says that "categories should be well defined, mutually exclusive (if possible), univocal, and exhaustive."¹³

A further effort was made to lend clearer definition of the three categories employed here. An attempt was made to indicate statistically the differences in the scores, indicating the three levels of peer-choice studied here. The idea was to test the differences between these PR scores against the Null Hypothesis in order to determine whether a real difference exists between them other than what might ordinarily be expected on the basis of chance. A 2 x 2 fold Chi Square technique was employed to demonstrate the significance of the difference between the limiting, or cut-off scores. While letting the limiting PR of one group represent f_o , and the PR of the other group represent f_e , the Chi Square Formula mentioned by Garrett was employed to indicate the difference between a PR of 10, and one of 45.¹⁴ This was also

¹³J. Guilford, Fundamental Statistics in Psychology and Education, 2nd Ed., New York, 1950, 15.

¹⁴Garrett, Statistics in Psychology and Education, 241.

done to indicate the difference between PRs of 90 and 55, and 90 and 10. This was also done to test the difference between limits described by PRs of 10 and 42, and 90 and 43. The resulting Chi Squares, and levels of significance are provided in Table VI.

TABLE VI
CHI SQUARES AND PROBABILITY FIGURES INDICATING THE SIGNIFICANCE
OF THE DIFFERENCES BETWEEN CERTAIN DISCRIMINATING
PERCENTILE RANKS

PR Limits	Chi Square	df	P
10-45	48.09	1	0.01
10-42	40.73	1	.01
90-55	48.09	1	.01
90-43	88.21	1	.01
90-10	702.25	1	0.01

It becomes apparent that the differences between these cut-off scores are highly significant in each case. They were considered capable of differentiating individuals to be designated as leaders, followers, and isolates. With the use of these limiting scores, the leaders, followers, and isolates in each group were then designated. This resulted in the selection of thirty-two leaders, forty-seven followers, and thirty isolates.

However, for various reasons, some individuals were moved from the cottages between the time the Sociometric Test was given, and the TAT was

administered. They were no longer available for testing. This meant that some leaders, followers, and isolates were not administered TATs, and that they had to be dropped from the study. As far as can be determined, no special factor operated to decide this, other than those related to administrative policies, and the function of the institution. These individuals were omitted on this basis. One leader, fourteen followers, and one isolate were dropped. This left thirty-one leaders, thirty-three followers, and twenty-nine isolates.

It became evident that the further use of these individuals as representative of leaders, followers, and isolates would also depend upon the influence of some other factors that might have some spurious influence upon the determination of their levels of status other than that provided by the function of the independent variable. It became necessary to control against the influence of some other variables that might be functioning in this respect.

Several individual factors were considered, but these were ruled out. Chronological Age was already controlled in the selection of the sample at the institution. Intelligence was also considered. However, no control was exercised over the influence of this factor. Jennings¹⁵ found intelligence to have no real influence upon choice-status. However, a more important reason for not controlling this variable lies in its probable relatedness with the independent variable. Intelligence is probably very closely related to such an individual variable as motivation, and is probably partly responsible for

¹⁵Helen Hall Jennings, Leadership and Isolation, 2nd Ed., New York, 1950, 142.

the degree and kind of motivation that an individual has. To rule out the influence of intelligence in the determination of status might also mean the ruling out of the influence of the variable to be studied. Therefore, no further effort was made to control for the influence of intelligence in the selection of leaders, followers, and isolates.

However, two other more nearly social factors seemed more important in this respect. One of these is race. Jennings pointed out that race similarity is "to be considered an attractive factor in choice."¹⁶ The other social factor that is known to influence choice-status is socio-economic status. Jennings mentioned that "increase in socio-economic status correlates with the number of choices received."¹⁷ Race and socio-economic status seemed especially in need of control in the present study. This became more evident following a comparison of the present groups of leaders, followers, and isolates in terms of these variables.

In order to obtain some idea of how race might have influenced the sociometric results in the present study, the number and per cent of negro and white boys in the leader, follower, and isolate groups is noted. This information is provided in Table VII. From this, it becomes apparent that the leader group contains almost twice as many white as negro boys. The follower and isolate groups both have slightly more negro than white boys. However, in the latter instances, the difference appears not to be great. The conclusion is

¹⁶Ibid., i.e., 12.

¹⁷Ibid., i.e., 15.

TABLE VII

NUMBER AND PER CENT OF NEGRO AND WHITE BOYS AMONG INDIVIDUALS
CLASSED AS LEADERS, FOLLOWERS, AND ISOLATES

Race	Leaders		Followers		Isolates	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Negro	11	36	18	55	15	52
White	20	64	15	45	14	48
Totals	31	100	33	100	29	100

that race probably had some influence upon the sociometric results obtained in this research, and that some further effort must be made to control for the influence of this factor in the determination of choice-status.

Since all the cottage groups at the institution housed mixed groups of negro and white boys, it was not possible to control for the influence of race on choice-status by testing only in negro groups, or only white groups. The test had to be administered to mixed groups. Therefore, efforts at control needed to be made later.

An effort was also made to get a measure of the socio-economic status of persons belonging to each of these three classes. A scheme provided by Kuder¹⁸ was utilized as a basis for this evaluation. With some minor revisions

¹⁸Frederic Kuder, Examiner Manual for the Kuder Preference Record, 5th Ed., Chicago, 1953, 22.

this system for classifying occupations was employed. The method of classification is indicated in Table VIII.

TABLE VIII
SCHEME USED FOR THE CLASSIFICATION OF OCCUPATION

Code	Classification
I	Professional and Managerial Workers
II	Clerical and Sales Workers
III	Service Workers
IV	Agricultural, Fishery, Forestry, and Kindred Workers
V	Skilled Workers
VI	Semi-skilled Workers
VII	Unskilled Workers
VIII	No Occupational Information Given

The occupation of the supporting parent or parent-substitute of every individual in each of the three groups was indicated according to this scheme of classification. The number of individuals in each of the three groups having parents in each of the classifications was determined. The per cent of the time that each occupational class was represented in each group was also computed. This information is provided in Table IX.

TABLE IX
OCCUPATIONS OF SUPPORTING PARENT OR SUBSTITUTE PARENT OF SUBJECTS
CLASSSED AS LEADERS, FOLLOWERS, AND ISOLATES

Code	Leader		Follower		Isolate	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
I			1	3.0		
II	1	3.0	1	3.0		
III	1	3.0	1	3.0		
IV			1	3.0		
V	6	19.0	2	6.0	5	17.0
VI	8	26.0	5	15.0	3	10.0
VII	8	26.0	15	46.0	14	49.0
VIII	7	23.0	7	21.0	7	24.0
Total	31	100.0	33	100.0	29	100.0

If the interval between Class VI and Class VII is considered a cut-off point, some features become evident. The leader individuals tend to be represented evenly on both sides of this classification scheme. Followers and isolates tend to locate at the lower end in this respect. In the latter two instances, a greater majority of the time these individuals came from homes where the parent is employed in some unskilled occupation. While using this as a line of demarcation, and the percentage above and below this point as scores, a 2 X 2

fold table of Chi Square was employed to check the significance of these differences between the three groups of individuals.¹⁹ The Chi Squares, and corresponding probability figures indicating the significance of the difference in the occupations of leaders, followers, and isolates are presented in Table X.

TABLE X
CHI SQUARES AND PROBABILITY FIGURES INDICATING THE SIGNIFICANCE
OF THE DIFFERENCES IN THE OCCUPATIONS OF THE PARENTS
OF LEADERS, FOLLOWERS, AND ISOLATES

Groups Compared	Chi Square	df	P
Leaders-Followers	8.85	1	0.01
Followers-Isolates	.05	1	.90
Leaders-Isolates	17.89	1	0.01

While testing the results against the Null Hypothesis that no real difference exists in the occupation of the parents of leaders-followers, followers-isolates, and leaders-isolates, a number of observations are provided. The hypothesis holds in the first and last instances. However, no significant differences exists in the second comparison. The occupational background in the families of followers and isolates are quite consistently the same. However, there are wide differences in the backgrounds of leaders and followers.

¹⁹Garrett, Statistics in Psychology and Education, 251.

and leaders and isolates.

An attempt was made to control for race and socio-economic status to prevent any spurious influence by these factors upon the results of this research. This was done by matching the three groups to be studied on the basis of these variables.²⁰ This matching procedure provided for an equal number of negro and white boys in each of the three groups studied. The number of negro and white boys having status as leaders, followers, and isolates, following matching, is indicated in Table XI.

TABLE XI
NUMBER OF NEGRO AND WHITE BOYS CLASSED AS LEADERS, FOLLOWERS,
AND ISOLATES AFTER MATCHING THE GROUPS

Race	L	F	I
Negro	10	10	10
White	15	15	15
Total	25	25	25

Individuals in the three groups were also matched on the basis of the occupation of the supporting parent. The matching procedure provided also for a more nearly equal number of individuals in each group being classified similarly in terms of the occupation of the parent. This information is given in Table XII.

²⁰Charles Peters and Walter Van Voorhis, Statistical Procedures and their Mathematical Bases, New York, 1940, 448.

TABLE XII

SOCIO-ECONOMIC STATUS OF LEADERS, FOLLOWERS, AND ISOLATES AS BASED ON
THE OCCUPATION OF THE SUPPORTING PARENT AFTER MATCHING THE GROUPS

Code	Leaders	Followers	Isolates
I		1	
II	1	1	
III	1	1	
IV		1	
V	4	2	5
VI	5	5	3
VII	7	7	10
VIII	7	7	7
Total	25	25	25

The matching procedure provided a final designation of individuals as leaders, followers, and isolates. Twenty-five subjects made up each of the groups.

D. TREATMENT OF THE TAT DATA

For purposes of legibility and convenience, the responses of every subject to each TAT card were copied on filing cards 5-inches by 8-inches in size. The TAT responses were left unidentified as to the name of the subject producing the response. However, each subject was assigned a code number, and all the responses were marked with the number of the subject producing them. The eleven cards containing the responses of each subject were then arranged in order, and assembled in packets in preparation for the analysis of the data.

The packets were then shuffled so that no particular order determined the selection of cases for the analysis. The unidentified protocols were then taken in random order from the stack of records, and analyzed. The cards in each record were examined in sequence, evaluated, and scored according to the system used in this research.

A separate score sheet was used to record the responses of each subject. Each response that was scorable under this method of analysis was recorded on this sheet. Each score sheet was identified with the code number of the subject giving the responses.

When the analysis of the TAT records of all subjects had been completed, the score sheets were collected for recording. The columns on each score sheet were totalled. These sheets were then separated into piles for leaders, followers, and isolates. The responses of individuals in each group were recorded for each of the five variables studied in terms of the number of cards, or responses, given to each variable. This provided the basis for the

treatment of the TAT data.

The total production of subjects in the leader, follower, and isolate groups on each of the experimental variables was computed. This was done in order to determine the kind and direction of trends relating to these variables.

The possibility of real differences existing in the performance of individuals in the three groups was investigated. The Null Hypothesis was applied as a basis for this evaluation. The assumption was that no real difference existed in the performance of leaders, followers, or isolates on the five experimental variables other than what might occur by chance, or sampling characteristics.

The Chi Square Test was employed to test this hypothesis in each instance. With the use of this technique, the performance of leaders was compared with that of followers. Followers were compared with isolates, and isolates were compared with leaders on each of the five variables studied. An adaptation of the Median Test was utilized to provide a basis for the use of Chi Square.²¹ In making a comparison between individuals in two groups on any variable, the scores produced by subjects in the two groups were first assembled into one group of scores. The scores in this common distribution were then ranked from highest to lowest scores. This distribution was then dichotomized at the Median. The upper end included the plus number of cases for each of the groups that were being compared. The bottom half of the distribution contained the minus number of cases for each group. When the cases fell on the Median, they

²¹Sidney Siegel, Nonparametric Statistics, New York, 1956, 111.

were placed in the lower, or minus end of the distribution.²² The plus and minus cases for each group then formed the basis for the use of Chi Square. In each case a 2 X 2 fold Chi Square Test of Independence was employed.²³ The Yates Correction technique was applied in each instance.²⁴

In the treatment of the results, and discussion of the findings, each of the variables has been identified with the number associated with their description in Chapter IV.

²²Ibid., i.e., 112.

²³Garrett, Statistics in Psychology and Education, 251.

²⁴Ibid., i.e., 246.

E. SOCIOMETRIC RESULTS

The treatment of the sociometric results provided a final sample of seventy-five subjects. There were an equal number of leaders, followers, and isolates. There were twenty-five subjects in each of these groups. In all but one instance, each cottage group contributed leaders, followers, and isolates to the sample. One group provided persons classed as leaders and isolates, but did not contribute followers to the experimental sample. As a whole, the experimental sample was representative of the eight groups tested. The number of leaders, followers, and isolates taken from each cottage is indicated in Table XIII.

TABLE XIII
NUMBER OF LEADERS, FOLLOWERS, AND ISOLATES SELECTED
FROM EACH OF THE EIGHT GROUPS TESTED

Cottage	Leaders	Followers	Isolates
I	4		2
II	3	4	1
III	4	4	6
IV	1	2	4
V	4	5	1
VI	3	2	5
VII	4	6	4
VIII	2	2	2
Total	25	25	25

F. EXPERIMENTAL FINDINGS

An examination of the total performance of leaders, followers, and isolates on the five variables, reflects several trends. These are indicated in Table XIV.

TABLE XIV
A COMPARISON OF LEADERS, FOLLOWERS, AND ISOLATES IN TERMS OF
TOTAL PERFORMANCE ON FIVE TAT VARIABLES

Ss	TAT VARIABLES				
	I	II	III	IV	V
Leaders	198	190	40	28	6
Followers	200	192	19	42	9
Isolates	181	169	16	33	31

First, with respect to the variables dealing with the extent that the subjects manifested the tendency to project, followers indicated a tendency to perceive more of the common features in the stimulus situations than did leaders or isolates. Isolates noted fewer of these than did leaders. Followers also demonstrated a tendency to become ego-involved and imaginative in situations to a slightly greater extent than did leaders, and, seemingly, much more so than did isolates. Leaders manifested a tendency to organize their

projections, and produce a complete response to the stimulus situation to a somewhat greater degree than did either followers or isolates. Isolates manifested less of this tendency than did followers. Several trends are also noted when the performance of leaders, followers, and isolates is interpreted in terms of the kind of projection that they manifested in the stimulus situations. Followers indicated a tendency to manifest more insecurity and apprehension in making their responses. Leaders tended to indicate less of this tendency than either isolates or followers. The isolates indicated a tendency to respond more on an unusual, incongruous, and peculiar level than did followers or leaders. The latter group reflected a slightly lesser tendency to manifest this type of response than did either followers or isolates.

However, this is a description of the results in terms of trends noted in the overall performance of individuals in the three groups. This data is examined primarily to note the direction of some trends developing from the performance of leaders, followers, and isolates. On this basis, some of the trends appeared strong, and others seemed of little real consequence. The usefulness and significance of these trends is noted with a continued investigation of the findings resulting from the further statistical treatment of the data.

The number of cases, or individuals, who placed above or below the Median on each variable in the comparison of the performance of leaders-followers, followers-isolates, and isolates-leaders on each experimental variable is indicated in Table XV.

TABLE XV

THE NUMBER OF CASES ABOVE AND BELOW THE COMMON MEDIANS AND RESULTING CHI SQUARES INDICATING
THE DIFFERENCES IN PERFORMANCE OF LEADERS, FOLLOWERS, AND ISOLATES ON THE FIVE
EXPERIMENTAL VARIABLES¹

Variables	Cutting Point	Number of Subjects						Chi Squares		
		L vs. F		F vs. I		I vs. L		Lvs. F	F vs. I	I vs. L
I	Above Mdn	3	1	13	9	9	14	0.272	0.440	1.288
	Below Mdn	22	24	12	16	16	11			
II	Above Mdn	10	9	12	11	11	14	.000	.440	.320
	Below Mdn	15	16	13	14	14	11			
III	Above Mdn	12	10	10	8	8	12	.082	.088	.750
	Below Mdn	13	15	15	17	17	13			
IV	Above Mdn	5	8	8	8	8	5	.470	.000	.416
	Below Mdn	20	17	17	17	17	20			
V	Above Mdn	5	5	5	15	15	5	.000	6.750	6.750
	Below Mdn	20	20	20	10	10	20			

¹With 1 df, a Chi Square must be 3.841 to be significant at the .05 level.
With 1 df, a Chi Square must be 6.635 to be significant at the .01 level.

This information indicates that there are no significant differences in the performance of leaders, followers, and isolates with respect to the extent that they project themselves into situations as this was measured by the first three variables. The Null Hypothesis appears supported in this respect.

However, some important findings are noted in relation to the kind of projection manifested by leaders, followers, and isolates. It is indicated that there are no significant differences between leaders, followers, or isolates in the degree to which they manifest apprehension or anxiety in response to the stimulus situations. However, there are significant differences between them in the extent to which they respond to such situations with unusual, incongruous, and peculiar characteristics.

Leaders and followers were noted previously to manifest less of a tendency for this type of response than did isolates. Isolates tended to respond with this type of projection to a greater extent than leaders or followers. A Chi Square of .000 indicated a lack of a difference between leaders and followers in this respect. However, a Chi Square of 6.75 indicated such a difference between leaders and isolates. This figure was found to be significant at the .01 level of confidence.²⁵ The difference in performance between followers and isolates on this variable was equally as significant. The Chi Square indicating this difference was also 6.70, and also was significant at the .01 level.

These findings tend to have negative implication for several of the hypotheses being tested in this research. However, the findings have positive implication for several others.

²⁵Ibid., i.e., 242.

There is no real indication that leaders, followers, and isolates differ in the extent to which they project themselves into situations as this has been measured in this study. The first hypothesis lacks affirmation in this research. There is no indication that leaders project themselves into situations to a greater extent than followers. This is also the case with respect to the second hypothesis. There is no real indication that leaders project themselves into various situations to a greater extent than isolates.

The third and fourth hypotheses also lack verification. No significant differences were found between leaders, followers, and isolates regarding the degree to which they might reflect anxiety when required to project themselves into various stimulus situations.

However, the findings support the fifth and sixth hypotheses. There is significant evidence to suggest that isolates tend to react to situations with unusual and incongruous behavior. They manifest this tendency to a significantly greater degree than followers. They also indicate this tendency to a significantly greater degree than do leader individuals.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The present study sought to investigate leadership, followership, and isolation among delinquent boys. The aim was to indicate several ways that the motivation of these individuals might account for their status in the group as leaders, followers, and isolates. One such motivational tendency was investigated in particular. That was the tendency that people have to be sociable and to participate socially.

Past research has resulted in the development of several trends that are closely related to the present problem. These trends are consistently apparent from other studies of leadership phenomena. One of these tends to point to the leader as an out-going, socializing person, who interacts a great deal with other individuals. The other tends to indicate isolates as retiring, ego-centric, provincial, and even unusual persons. The present research was designed to test some specific aspects of this, and to investigate these trends as they might be related to status among delinquent boys.

The concept of projection was employed as a basis for several hypotheses relating to these more general trends. This idea was utilized, because it is a fairly common concept in the field, and involves the idea that individuals have a tendency to contact, react to, and to interact with other people, places, and things according to the nature of their own individual experiences, motives, attitudes, feelings, and emotions. Two general aspects of this were selected

for study in relation to the status of persons in this research. One attempt was made to investigate how the extent or degree of projection might determine the status of these individuals. The other was concerned with determining how some characteristics of projection might influence the determination of status among these subjects. In the last instance, investigation was narrowed to a study of inadequate and unusual projection, and how this might be related to status.

Several hypotheses were then formulated to test the extent and nature of the projections of leaders, followers, and isolates among this group of individuals. It was thought that leaders would indicate a greater tendency to project themselves into situations than would followers or isolates. It was also hypothesized that isolates would manifest more anxiety, and, also more unusual and incongruous behavior in their projections than would leaders or followers. These ideas were then put to the test.

Institutionalized delinquent boys composed the sample. It was convenient to study their social adjustment, since they were housed in groups for that purpose. An adaptation of the Sociometric Test was employed to evaluate the leader, follower, and isolate status of individuals in eight such groups. Leaders, followers, and isolates were then matched as closely as possible in terms of race and socio-economic background in order to be sure that these were not the central factors in determining the choice-status of these persons.

The TAT, a noted and accepted projective test, was employed to provide a series of stimulus situations, into which leaders, followers, and isolates could project, and indicate the degree and nature of their projections. An assumption underlying the use of the TAT, is that the response of individuals

to the test stimuli is indicative of his usual mode of response in real situations. The TAT pictures were then carefully selected to provide simulated social situations which the subjects might contact, react to, and interact with. Several cards were also included to be really discriminating of the extent to which the subjects might project themselves.

The practice in research is to develop a form of the TAT that will best fit the needs of the particular study. This was done here in selecting the variables to be used in measuring the hypotheses, and in setting up a scoring system for the evaluating and scoring of the responses.

Items were selected from several recognized sources. Three items were chosen to measure extent of projection. Two items were selected to evaluate the nature of the projections of leaders, followers, and isolates. The first item dealt with the appraisal of a subject's ability to perceive outstanding elements in a stimulus situation. The second was used to evaluate his ability to become more deeply involved in the situation. The third was used to evaluate his ability to produce a complete and scorable response to the stimulus situation. All three were selected to indicate the extent of projection in this study. A fourth item was selected to indicate inadequacy in projection. This one was chosen to evaluate anxiety in such situations. The fifth item was employed to appraise egocentric, provincial, unusual, incongruous, and even bizarre projection in the stimulus situations.

The tests were given, and the results evaluated. Twenty-five leaders, and the same number of followers and isolates were used in the final evaluation of the data. Information was obtained to indicate the validity and reliability of the sociometric results. Two measures of reliability, indicated the consistency

of the results obtained with the TAT.

No significant differences were found in the extent to which leaders, followers, or isolates project themselves into various situations as this tendency was measured in this research. However, significant differences were noted between them with respect to the nature of the projections that they manifested in responding to various stimulus situations. Isolates reflect a significantly greater tendency to manifest unusual and incongruous behavior in their responses than do leaders or followers.

One conclusion arising from the findings is that the volume or degree of projection is probably not the prime factor as related to the status of leaders, followers, or isolates. All of these indicate this to a very nearly similar degree. All seem capable of projecting, and especially if encouraged to do so. However, this conclusion can only be stated tentatively at present. There is the possibility that the three indices used to measure this are not sufficient, and that others should be used in an attempt to add reliability to this finding. There remains a need for more research in this respect.

The findings pertaining to the differences in the nature of the projections of leaders, followers, and isolates provide a second more apparent conclusion. The projections of these individuals might serve as impediments to social adjustment, and have implications in terms of the realization of various social goals, and, particularly, the acquisition of status as leaders, followers, and isolates. Isolates probably have low status in the group, because they are inadequate in their social relationships. When isolates are required to project themselves outward, they react with provincial, unusual, and incongruous behavior. This is a barrier to social interaction. Others

probably assign these persons lower status in the group, because they make no real contribution in the social situation, and such persons even provide a threat to other group members who are more nearly interacting on a popular level while attempting to realize various common goals. This is consistent with trends developing from research in this area.

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APPENDIX I

DIRECTIONS AND SCORING SYSTEM FOR THE EVALUATION
OF THE TAT MATERIAL

I. GENERAL DIRECTIONS

- A. The response to each card is read carefully, and then evaluated in terms of the five variables described below.
- B. The following directions are employed in the evaluation of the responses for each variable.
- C. The scoring of each response is indicated in the appropriate place on the score sheet.
- D. The cards which have been rejected by the subject by explicit verbal rejection, or omission, are not evaluated or scored.
- E. When there is any doubt about any aspect of the analysis of a response, the response is not evaluated or scored.

II. SPECIFIC DIRECTIONS FOR THE FIVE VARIABLES

A. Perception of Outstanding Features

- 1. A list of outstanding features of each TAT card is provided on the score sheet.
- 2. Each card or response given by each subject is checked, and the expected features are noted as they appear in the responses given.
- 3. An (X) is placed in the scoring column on the score sheet opposite the appropriate card number when the response contains all of the outstanding features listed for that card.

B. Depth of Projection

- 1. Each response given by the subject is carefully examined.
- 2. An effort is made to judge whether or not the subject became ego-involved in the situation to the extent of attributing feelings,

emotions, ideas, or attitudes to one or more characters in the story.

3. A response is not scored under this category if it is purely a descriptive one. For example, if it consists only of a series of descriptive statements such as: This is a house. This is a barn. This is a man., etc.
4. A response is not scored under this category if it merely reflects action on some simple level, or some type of simple interaction. For example, responses such as: He walked out of the house. He went to the store. He said he was going, etc.
5. If the response can be judged as an ego-involved and imaginative one, an (X) is placed in the scoring column alongside the appropriate card number on the score sheet.

C. Organisation of the Response in the Production of a Thema or Story

1. The responses of the subject are studied to determine whether each story contains four features that are thought necessary to the development of a thema or story.
2. The four features must be related in some consistent manner in order to be scored.
3. The four features are interpreted as follows:
 - a. The story must contain some description of the environment of the characters. This is given specific meaning in the present system of evaluation. This criteria is scored, only if the adjustment of the character is wholly or in part related in some important manner to past socio-economic over-indulgence or deprivation.
 - b. The story must further contain some obvious indication of the feelings, emotions, needs, or desires of one or more of the characters. This might be noted by explicit verbiage, or may be interpreted by the dynamic content of the story, if there is considerable evidence for such an interpretation.
 - c. The story must contain evidence of some character reacting to some other person, place, or thing in terms of the above factors. The reaction may be on the levels of awareness, action, ideation, or feeling.

- d. The story must provide an outcome or a conclusion resulting from the above. This might be reflected in insight into some moral principle, the development of some purpose which the character reflects upon, or the realization of some goal.
- e. The response marked by an (X) in the scoring column alongside the appropriate card number on the score sheet if it contains all four of these features in some related and consistent manner.

D. Side Remarks and Other Asides

1. Each response is checked for the appearance of side remarks made by the subject during his response to a card.
2. These, are first of all, remarks that are made definitely out of context to the response itself. These are remarks which might be addressed to the test materials, the examiner, the situation, to others, or explicitly statements of self-reference that are not considered a portion of the text. For example, the subject might say: "I can't think of anymore." He might say: "You know what I mean!", etc.
3. This also included the use of some other asides. For example, the use of such expressions as: uhi, huh?, hmi, etc.
4. An (X) is placed in the scoring column for that variable alongside the appropriate card on the score sheet if the card or response includes such remarks or asides.

E. Incongruity, unusualness, or Peculiarity of Response

1. Each story or response produced by the subject is carefully read and examined for the appearance of any of the following characteristics:
 - a. The subject provides a fairly consistent theme or response, and then, at the very end, he rejects or denies the response entirely.
 - b. The subject employs what appears to be very assuredly a neologism.
 - c. The subject employs a legitimate word or term, but the word has absolutely no meaning or relationship to the context in which it has been used.
 - d. The subject, without any show of awareness or any effort

at clarification, accepts something as immediate fact that is impossible in practical reality.

- e. The subject, without any statement of clarification or any real indication of awareness, identifies with a character in the story who is involved in a fantasy situation, but who, by all appearances, functions in this situation as if it were concrete reality.
- f. A character is described as being in a dream. Suddenly the same character is described as acting on a reality level with no indication in the story that he is no longer dreaming.
- g. The character in the story experiences hallucinations:
 - 1) The character is apprehensive and worried, because he experiences some strange sound or other sensation. Even if the character investigates and finds no source for this, he manifests some belief that it persists without a source.
 - 2) The character hears a sound or has some other strange sensation. He anticipates no action, and takes none to check the source of the sensation, and with no further clarification, evidently allows this sensation to continue unexplained.

TAT Variables

Card Number	Extent of Projection			Kind of Projection	
	A	B	C	D	E
1	boy violin statement of relationship				
2	young woman man older woman background scene				
4	man first woman second woman				
5	woman room				
6BM	woman man				
7BM	one man second man				
8BM	boy background scene				
10	woman man				
12M	young man elderly man				
14	a person room or window				
16					

Total
Cards

APPENDIX II
DISTRIBUTION OF POSITIVE CHOICE IN EIGHT
COTTAGES STUDIED

Number of Persons Choosing Each S	Number Subjects in Each Group Receiving Given Number of Choices							
	I	II	III	IV	V	VI	VII	VIII
23	1							
22								
21		1						
20								
19		1						
18								
17								
16		1						
15					1			
14	1						1	
13	1		2					
12		1	1	1	1	2		
11						1	1	1
10		1			2	2	2	1
9	2	1	1	1		2	1	2
8	3	1	1	6		2	1	3

APPENDIX II (continued)

DISTRIBUTION OF POSITIVE CHOICE IN EIGHT

COTTAGES STUDIED

Number of Persons Choosing Each S	Number Subjects in Each Group Receiving Given Number of Choices							
	I	II	III	IV	V	VI	VII	VIII
7	2	2	2	1	2	3	1	
6	3	4	1	3	1	1	3	
5	4	9	4	5	2	3	3	4
4	4	4	7	3	3	3	4	7
3	5	7	5	3	13	1	8	3
2	4	6	9	4	3	5	8	3
1	7	10	7	4	3	4	2	3
0	2	2	6	4	1	5	2	3

APPROVAL SHEET

The dissertation submitted by Robert G. Milligan has been read and approved by five members of the Department of Psychology.

The final copies have been examined by the Director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the dissertation is now given final approval with reference to content, form, and mechanical accuracy.

The dissertation is therefore accepted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy.

January 26, 1959
Date

Frank J. Kobler
Signature of Adviser